

POPULATION STUDY

POPULATION

The population study and projection is used to form a basis for the future land use requirement so that schools, parks, public buildings, utilities and streets can be provided as population grows.

The population of Firth can best be understood by relating them to those of the past history, the area, the county, the state and the nation. This section presents the comparative analysis of population distribution, characteristics, and projections of Firth.

Population Trend

The population may change because of migration. People generally migrate to and from areas of greater or lesser opportunities. The population may also change because of the resident births and deaths - these are termed as natural increase or decrease. The population of Firth has increased from 1880 to 1910. From 1910 to 1950 the village suffered from a general decline in population due to the changes in economic structure. Agriculture was no longer a primary employer, and more and more farm workers moved into metropolitan areas where job opportunities in business and industry existed. The population of Firth increased steadily since 1950 due to the fact that Firth is located within the Lincoln Standard Metropolitan Statistical Area (SMSA) where the population growth rate is above the regional SMSA average.

Another important factor which contributed to Firth's growth was the in-migration of retired farmers from the surrounding area. The most recent population estimate of 330 people is the highest figure in the history of Firth except in 1910, when the population was 343. Table 8 shows the number and percentage of population change per decennial year since 1880.

The population trend for South Pass Precinct, Firth, Lancaster County, State of Nebraska, and the United States have been listed in Table 9. As may be seen in this table, the population of the United States expanded more than twofold from 1900 to 1960, whereas the State of Nebraska increased only 32.4 per cent. Lancaster County has experienced a steady growth from 64,835 persons in 1900 to 155,272 persons in 1960, or an increase of 240 per cent. In comparison, Firth had a slower rate of growth than the Lancaster County, the United States and the State of Nebraska, but a faster growth rate than South Pass Precinct.

The population trend since 1900 between all twelve villages in Lancaster County was compared in Table 10. With the exception of Hallam, Hickman, and Waverly, Firth had the greatest growth trend among these villages.

Table 11 shows the population trend comparisons between Lancaster County and its adjacent counties. The table indicates that the population in Lancaster County has more than doubled, whereas the population in the surrounding counties decreased since 1900.

Table 8
POPULATION TREND
Firth, Nebraska
1880 - 1968

<u>Year</u>	<u>Population</u>	<u>Change</u>	<u>Per Cent Change</u>
1880	230	---	---
1890	259	+29	+12.6
1900	307	+48	+18.5
1910	343	+36	+11.7
1920	322	-21	- 6.1
1930	322	0	0.0
1940	323	+ 1	+ 0.3
1950	245	-78	-24.2
1960	277	+32	+13.1
1968	330*	+53	+19.2

Source: United States Census, 1880 - 1960

*Survey by Nebraska Department of Economic Development

Table 9
POPULATION TREND
for
South Pass Precinct
Village of Firth
Lancaster County
State of Nebraska
United States

<u>Year</u>	<u>South Pass Precinct</u>	<u>Percent of Change</u>	<u>Firth</u>	<u>Percent of Change</u>	<u>Lancaster County</u>	<u>Percent of Change</u>	<u>Nebraska (000)</u>	<u>Percent of Change</u>	<u>U. S. (000)</u>	<u>Percent of Change</u>
1900	1,257	-----	307	-----	64,835	-----	1,066	-----	76,212	-----
1910	1,180	-6.1	343	+36.0	73,793	+13.9	1,192	+11.8	92,228	+21.0
1920	1,178	-0.2	322	-21.0	85,902	+16.4	1,296	+8.7	106,021	+14.9
1930	1,043	-11.5	322	0.0	100,324	+16.8	1,378	+6.3	123,202	+16.2
1940	889	-14.7	323	+0.3	100,585	+0.3	1,316	-4.5	132,165	+7.3
1950	747	-16.0	245	-24.2	119,742	+19.1	1,326	+0.7	151,326	+14.5
1960	818	+9.5	277	+13.1	155,272	+30.0	1,411	+6.5	176,323	+15.6

Source: United States Census, 1900 - 1960

Table 10
POPULATION TREND COMPARISONS
BETWEEN
VILLAGES IN LANCASTER COUNTY
1900-1960

<u>Villages</u>	<u>1900</u>	<u>1910</u>	<u>Percent of Change</u>	<u>1920</u>	<u>Percent of Change</u>	<u>1930</u>	<u>Percent of Change</u>	<u>1940</u>	<u>Percent of Change</u>	<u>1950</u>	<u>Percent of Change</u>	<u>1960</u>	<u>Percent of Change</u>
Hallam	----	168	-----	212	+26.2	193	- 9.0	168	-13.0	172	+ 2.4	264	+53.5
Sprague	----	----	-----	112	-----	135	+20.5	121	-10.4	110	- 9.1	120	+ 9.1
Denton	----	----	-----	145	-----	114	-21.4	126	+10.5	101	-19.9	94	- 6.9
Malcolm	----	----	-----	125	-----	121	- 3.2	121	0.0	93	-23.2	116	+24.8
Bennet	495	457	- 7.7	473	+ 3.5	428	- 9.5	412	- 3.7	396	- 3.9	381	- 3.8
Raymond	200	236	+18.0	249	+ 5.5	205	-17.7	199	- 2.9	196	- 1.5	223	+13.8
Panama	----	230	-----	210	- 8.7	198	- 5.7	174	-12.1	168	- 3.5	155	- 7.8
Davey	----	----	-----	123	-----	154	+25.2	125	-18.8	112	-14.0	121	+ 8.0
Hickman	382	388	+ 1.6	380	- 2.1	302	-20.6	320	+ 6.0	276	-12.8	288	+ 3.2
Roca	177	129	-27.0	133	+ 3.1	107	-19.5	127	+18.7	105	-17.3	123	+17.2
Waverly	266	297	+11.7	334	+12.5	315	- 5.7	306	- 2.9	310	+ 1.3	511	+65.0
Firth	307	343	+11.7	332	- 3.2	322	- 3.0	323	+ 0.3	245	-24.2	277	+13.1

Source: United States Census, 1900 - 1960

Table 11
POPULATION TREND COMPARISONS
BETWEEN LANCASTER COUNTY AND
ADJACENT COUNTIES
1900-1960

<u>Counties</u>	<u>1900</u>	<u>1910</u>	<u>Percent of Change</u>	<u>1920</u>	<u>Percent of Change</u>	<u>1930</u>	<u>Percent of Change</u>	<u>1940</u>	<u>Percent of Change</u>	<u>1950</u>	<u>Percent of Change</u>	<u>1960</u>	<u>Percent of Change</u>
Saunders	22,085	21,179	- 4.4	20,589	- 2.9	20,167	- 2.1	17,892	-11.2	16,923	- 5.4	17,270	+ 2.0
Cass	21,330	19,786	- 7.3	18,029	- 8.9	17,684	- 1.9	16,992	- 3.9	16,361	- 3.7	17,821	+ 8.9
Otoe	22,288	19,323	-13.3	19,494	+ 0.9	19,901	+ 2.1	18,994	- 4.6	17,056	-10.2	16,503	- 3.2
Johnson	11,197	10,187	- 9.0	8,940	-12.2	9,157	+ 2.4	8,662	- 5.4	7,251	-16.3	6,281	-13.4
Gage	30,051	30,325	+ 0.9	29,721	- 2.0	30,242	+ 1.8	29,588	- 2.2	28,052	- 5.2	26,818	- 4.4
Saline	18,252	17,866	- 2.1	16,514	- 7.6	16,356	- 1.0	15,010	- 0.8	14,046	- 6.0	12,542	-10.8
Seward	15,690	15,895	+ 1.3	15,867	- 0.2	15,938	+ 0.4	14,167	-11.2	13,155	- 7.1	13,581	+ 3.2
Butler	15,703	15,403	- 1.9	14,606	- 7.0	14,410	- 1.3	13,106	- 9.0	11,432	-12.8	10,312	- 9.8
<u>Lancaster</u>	64,835	73,793	+13.9	85,902	+16.4	100,324	+16.8	100,585	+ 0.3	119,742	+19.0	155,272	+30.0

Source: United States Census, 1900 - 1960

The obvious reasons for such decline are the decrease in agricultural employment in these counties, and the out-migration of people to Omaha, Lincoln and some other metropolitan areas for better employment opportunity.

Table 12 is a comparison of population trend between villages of similar size in the adjacent counties of Firth. Like the previous tables, the population changes were reduced to per cent increases or decreases from each decennial census to the next. With the exception of Yutan in Saunders County, Firth again had the greatest growth trend among the villages of similar size since 1900.

From the five tables discussed above, it is clearly indicated that Firth had a greater growth trend than the majority of the villages in the surrounding area.

Population Characteristics

Illustration 8 shows the age composition of the population for Firth, Nebraska, and the United States. It indicates that the population groups of 0 to 4, 5 to 14, 15 to 24, 25 to 34, 35 to 44, and 45 to 54 in Firth are less than both the United States and Nebraska in percentage of total population. Yet the older age groups of

55 to 64, and 65 and over far exceed the percentage of the nation and the state.

In comparing the percentages of persons in each age group for 1960 and 1968 in Firth as shown in Illustration 9, it is found that age groups of 0 to 4, 15 to 24, 45 to 54, and 65 and over has increased. The age group of 5 to 14 remains about the same; while the age groups of 25 to 34, 35 to 44, and 55 to 64 have decreased in percentage.

The two Illustrations revealed the following facts: (1) Firth has a disproportionately large number of older people who are at their retired age. This means that the community should have adequate facilities for the older people such as housing for the aged, nursing home, passive recreation facilities and areas, and convenient shopping places. (2) There is a relatively small number of people ranging from 25 to 44 years old. This is an important population group since these people have completed their education and are ready or have joined the labor force of the community, married and established new homes. (3) The in-migration was greater than out-migration from 1960 to 1968. But there is a tendency that the younger people are gradually replaced by older ones.

The median age of Firth's population is 36.2 years as compared to 30.2 years for Nebraska and 29.2 years for the United States.

Table 12
POPULATION TREND COMPARISONS
BETWEEN
VILLAGES OF SIMILAR SIZE IN ADJACENT COUNTIES
1900-1960

<u>Villages</u>	<u>1900</u>	<u>1910</u>	<u>Percent of Change</u>	<u>1920</u>	<u>Percent of Change</u>	<u>1930</u>	<u>Percent of Change</u>	<u>1940</u>	<u>Percent of Change</u>	<u>1950</u>	<u>Percent of Change</u>	<u>1960</u>	<u>Percent of Change</u>
Yutan (Saunders)	263	253	- 3.8	300	-15.0	313	+ 4.3	268	-14.4	287	+ 7.1	335	+16.7
Union (Cass)	282	302	+ 7.1	292	- 3.3	316	+ 8.2	364	+15.2	277	-23.9	303	+ 9.4
Dunbar (Otoe)	208	216	+ 3.8	312	- 1.9	292	- 6.4	336	+15.1	228	-32.2	232	+ 1.8
Cook (Johnson)	---	387	-----	366	- 5.4	354	- 3.3	305	-13.9	332	+ 8.9	313	- 5.7
Cortland (Gage)	390	364	- 6.7	322	-11.5	318	- 1.2	307	- 3.5	288	- 6.2	285	- 1.0
Tobias (Saline)	672	445	- 4.0	357	- 2.7	402	+11.2	316	-21.4	240	-24.0	202	-15.9
Staplehurst (Seward)	211	228	+ 3.3	235	+ 3.1	254	+ 7.5	234	- 7.9	224	- 4.3	240	+ 7.2
Rising City (Butler)	499	459	- 8.6	460	+ 0.9	472	+ 2.6	420	-11.0	374	-11.0	308	-17.7
Firth (Lancaster)	307	343	+11.7	322	- 6.1	322	0.0	323	+ 0.3	245	-24.2	277	+13.1

Source: United States Census, 1900 - 1960

Illustration 8

POPULATION COMPOSITION

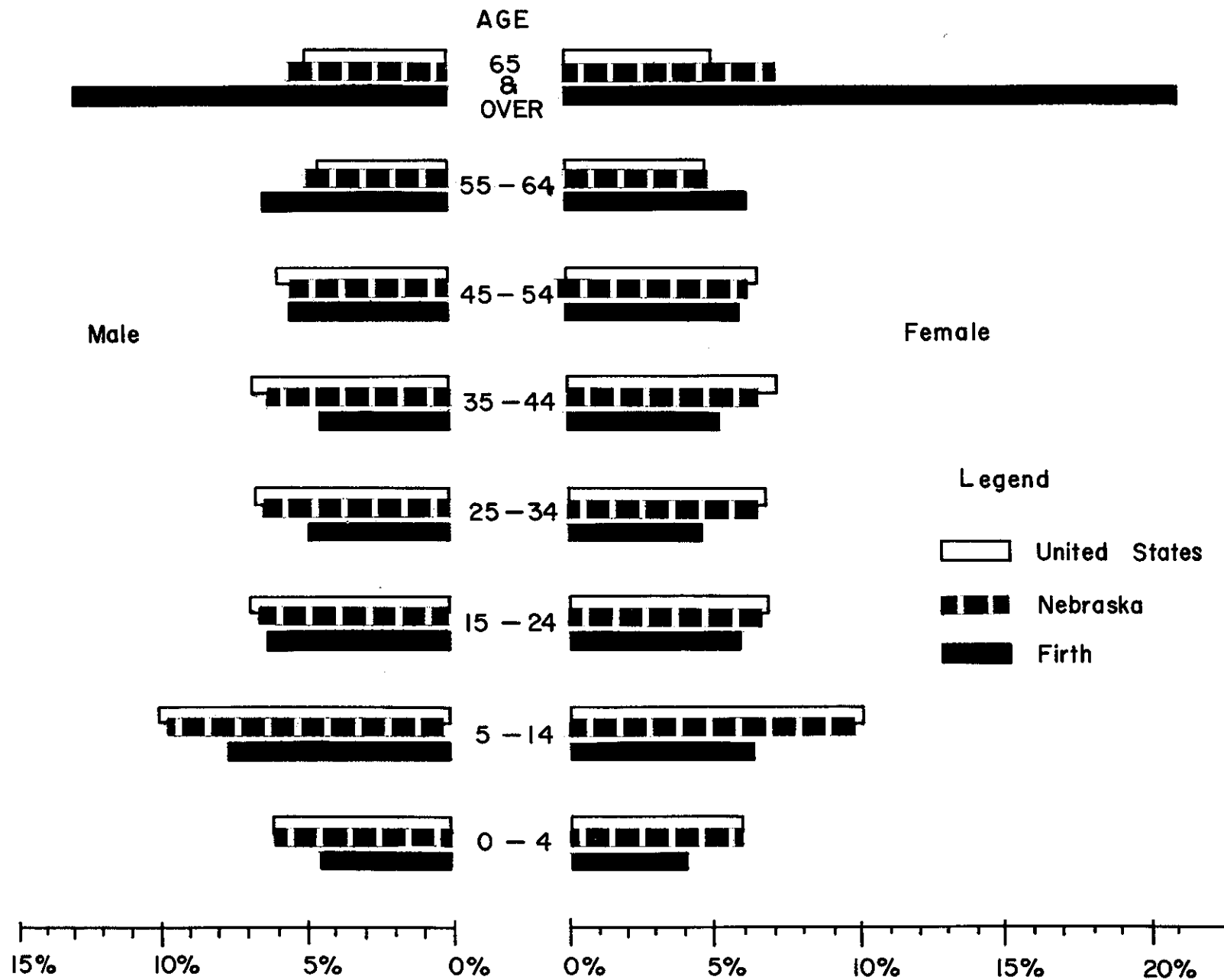
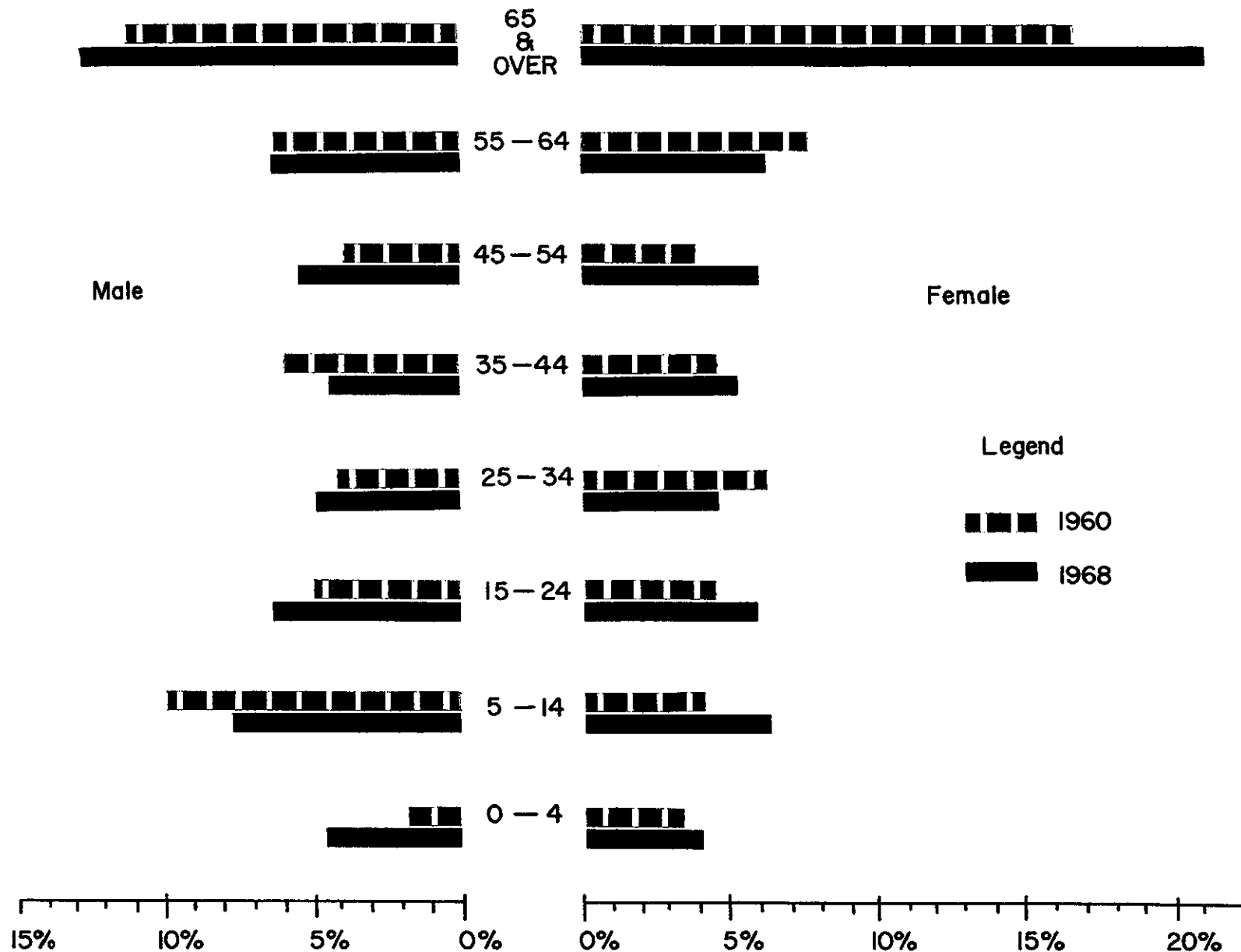


Illustration 9 POPULATION COMPOSITION

FIRTH, NEBRASKA

1960 and 1968



There is no non-white population living in Firth. The population per household in 1968 was 2.44 persons as compared to 2.52 persons in 1960. Table 13 presents some of the population characteristics such as race, relationship, age and marital status of Firth.

Population Density

The density of population is an important measure of the intensity of use and of the concentration of people in areas of a city. When people are congregated too closely, public health and safety can be affected.

The population density in Firth is 9.6 persons per acre of residential land, or about 4 dwelling units per acre. This density is characteristic of small rural towns which are predominately residential. It is also indicative of a wholesome environment with ample open space, light and clean air.

The average lot size is approximately 14,000 square feet, and the lots range from 7,000 square feet to 21,000 square feet. The smaller lots occur at the Central Business District where lot splitting has occurred.

The low density environment in Firth is a good practice. This is an excellent standard and should be used in guiding future development.

Population Distribution

The graphic presentation on Illustration 10 shows the 1968 population distribution by age groups, they are: 0 to 9, 10 to 19, 20 to 39, 40 to 64, and 65 and over.

The 0 to 9 age group can be found mostly on the eastern half of the village. Majority of 10 to 19 and 20 to 39 age groups are located at northern half of the community. The age groups of 40 to 64 and 65 and over are distributed evenly over the community.

It is also shown on the same Illustration that the population density is higher on the northern half of the community, and many vacant lots on the southern half of the village.

Population Projection

In the population projection of a community, several variables and factors should be studied and analyzed. They are: (1) flexible city boundaries and possible annexation, (2) fluctuating migration, (3) a mobile population, (4) social and economic forces, and (5) urbanization. In most forecasts, certain assumptions are taken into account, such as no major depression, no major war, the form of government and the social and economic organization of the state, county and city will not change substantially, and there will be no great discovery of natural resources in the areas which will effect the growth of the community.

Table 13

POPULATION CHARACTERISTICS
Firth, Nebraska
1960

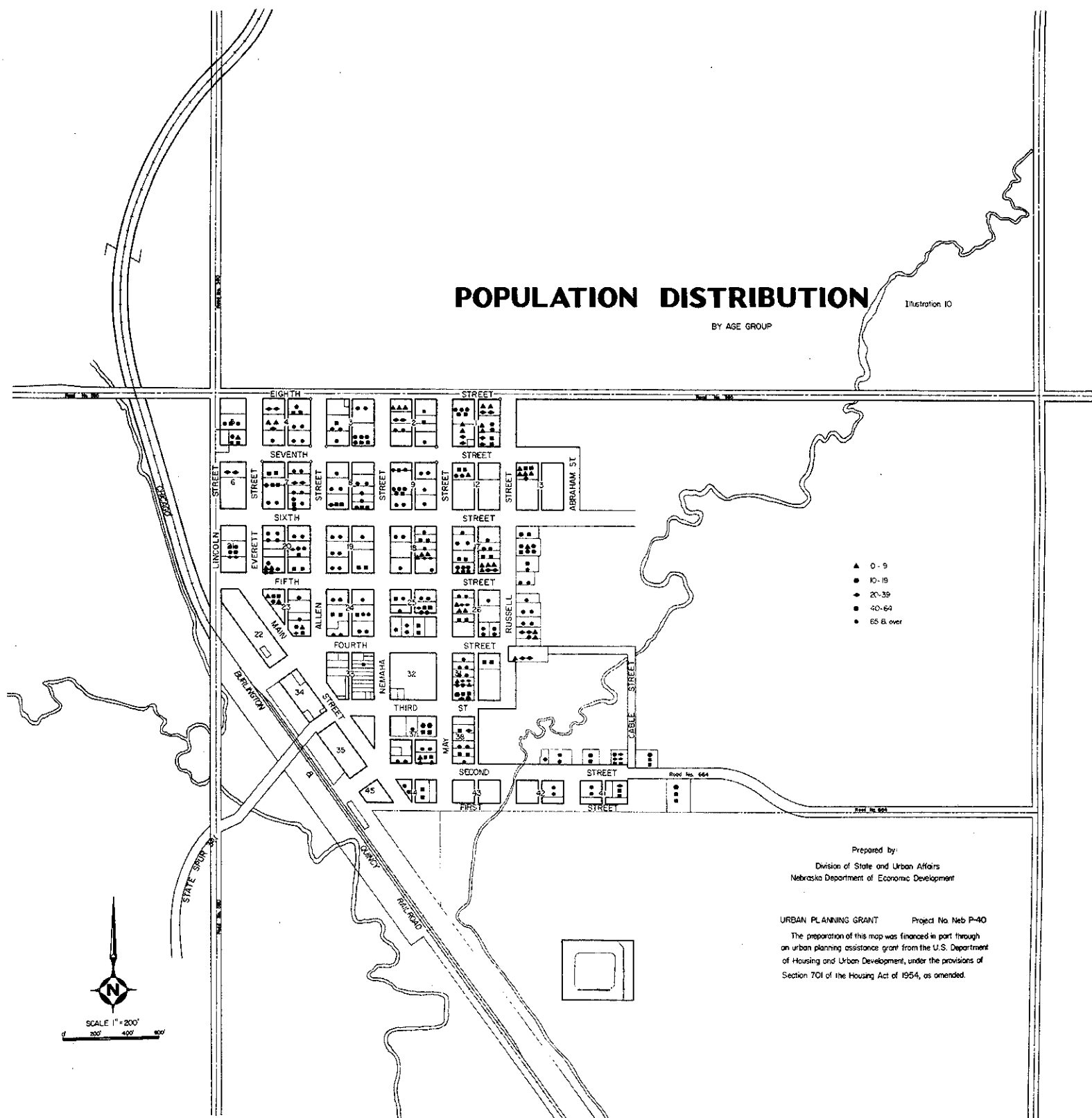
<u>Race, relationship, age, and marital status</u>	
Total population	277
White	277
Negro	---
Other races	---
Total population	277
Population in Households	277
Head of household	110
Head of primary family	84
Primary individual	26
Wife of head	79
Children under 18	61
Other relative	29
Nonrelative	2
Population in group quarters	---
Inmate of institution	---
Other	---
Population per household	2.52

Source: United States Census, 1960

POPULATION DISTRIBUTION

BY AGE GROUP

Illustration 10



Prepared by:
Division of State and Urban Affairs
Nebraska Department of Economic Development

URBAN PLANNING GRANT Project No. Neb P-40

The preparation of this map was financed in part through an urban planning assistance grant from the U.S. Department of Housing and Urban Development, under the provisions of Section 701 of the Housing Act of 1954, as amended.

There are several methods of projecting population. If the economy is stable and well diversified, a simple extension of growth trends may provide a sufficient population forecast. If the community is dependent on a region, then this factor is of primary importance. In a small area like Firth where many data are lacking and the growth depends very much on Lincoln and Lancaster County, the ratio step down method is most appropriate. The method assumes that population growth will occur at the same rate as a larger region, usually the county, the state and the nation.

Table 14 shows the estimates of the population in 1990. Series A, B, and C of the U.S. population projection made by the U.S. Census Bureau were used as high, medium and low estimates. Through this ratio step down method, the high estimate for Firth is 720 people, and the medium figure is 469, and the low projection is 286 people in year 1990.

For planning purpose, the medium estimate of 469 people in 1990 will be used. The reason is that all population projection is only an indication of what can happen rather than what will happen. Giving the medium estimate will insure the village to provide adequate and realistic land reserves for future growth in case it happens as predicted.

The following tabulation is the optimistic estimate of population for 5-year increments beginning with the year 1970.

OPTIMISTIC ESTIMATED POPULATION GROWTH

<u>Year</u>	<u>Population</u>
1970	342
1975	371
1980	402
1985	435
1990	469

School Age Population Projection

Based on the assumption that the school age population will increase approximately the same rate as the total population, and that the total population in 1990 will be 469, the number of families in Firth will be about 192 in 1990. (The number of persons per household is 2.44) According to the National School Standards of the U.S. Department of Health, Education and Welfare, there is an average of 0.75 students of all ages in the average family. Using this 0.75 factor, it is found that the total estimated number of students in Firth will be 144 in the year 1990.

Table 14
POPULATION PROJECTION
FIRTH, NEBRASKA

<u>Year</u>	<u>United States</u>	<u>Nebraska</u>	<u>Ratio of** Nebraska/U. S.</u>	<u>Lancaster County</u>	<u>Ratio of** Lancaster Co./Nebraska</u>	<u>Firth</u>	<u>Ratio of** Firth/Lancaster Co.</u>
1990 (High)	300,131,000*	2,401,048	0.8	360,157	15.0	720	0.20
1990 (Medium)	286,501,000*	2,005,507	0.7	260,716	13.0	469	0.18
1990 (Low)	270,770,000*	1,624,620	0.6	178,708	11.0	286	0.16

Source: *U. S. Bureau of Census, Series P-25 No. 381, December 18, 1967

**Ratios are obtained from the past trend, from 1910 to 1960.

The following breakdowns of number of students have been established by the U.S. Bureau of Census :

Elementary School	55% of students
Junior High School	23% of students
Senior High School	22% of students

Using the above breakdowns, it is found that there will be 79 elementary students, 33 junior high students, and 32 senior high students in 1990.